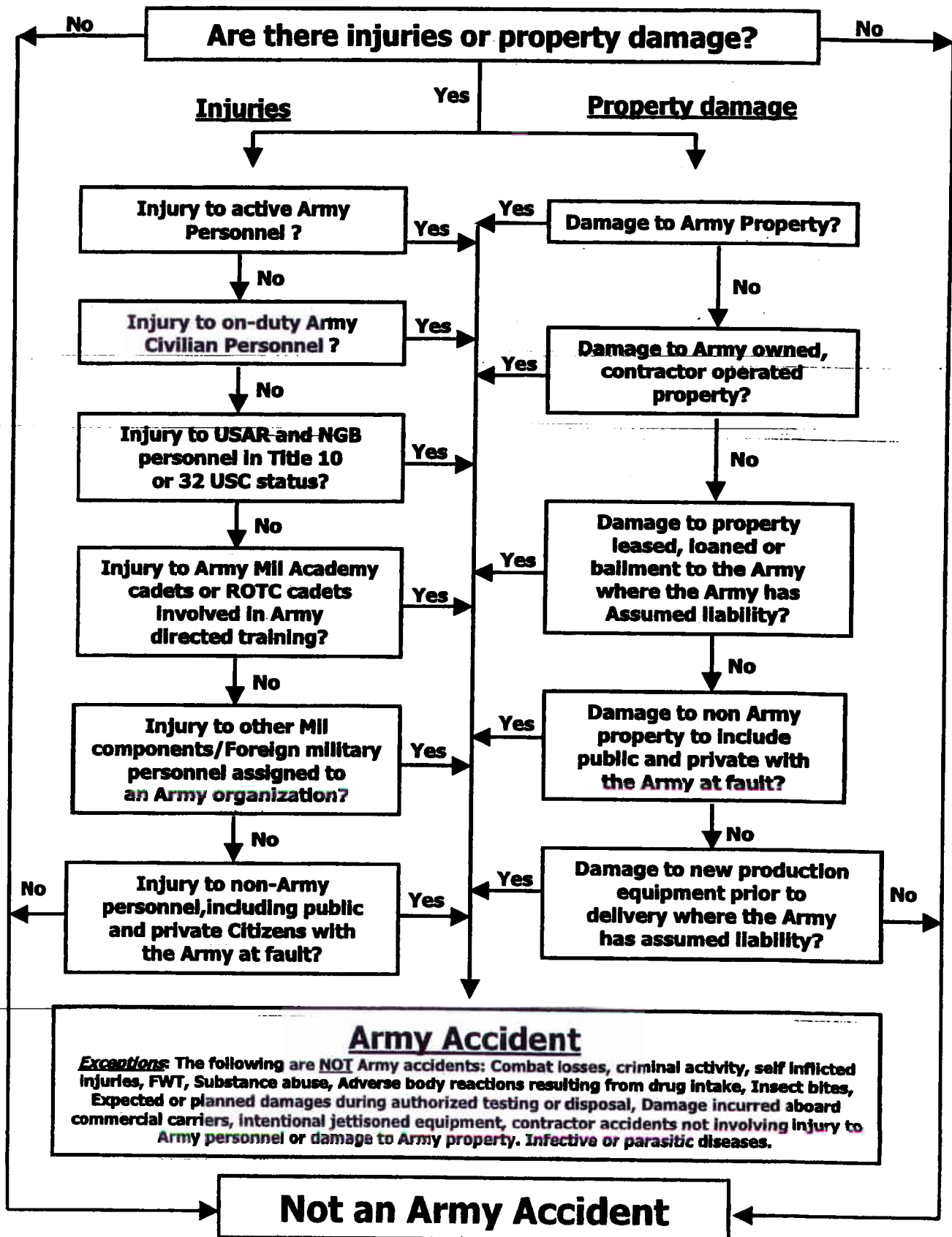


# Is it an Army Accident?



## DA Form 285 (Full-Report) Ground Accident Report Review

An accident folder is required for all Class A and B on duty accidents. When assembling the report, give special consideration to the following:

- Original copies of substantiating data should not be appended to the report. Leave the originals with the unit for legal/collateral investigations. Copies of substantiating data submitted with the report must be legible and suitable for additional reproduction.
- Extracts or concise quotes of regulations, tasks, performance standards, specifications, and other directives are preferred in lieu of whole source documents to minimize bulk. When used, extracts will include information which identifies the source document with date and latest change or update.
- Substantiating data referred to in other parts of the report will have key words, phrases, or passages highlighted to complement the review of the report. Underlining or annotating margins is preferred.

The assembled information will be submitted as follows:

<p>Use a folder to enclose the forms and substantiating data for each copy of each report.</p>	
<p>The front of the folder will be marked with the following information:          Technical Report of US Army Class ( ) Ground Accident;          Type Equipment and Serial No.          Date of the Accident:          Location of accident:          Unit:          Example of acceptable label:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p style="text-align: center;">General Use Technical Report of US Army Class A Ground Accident</p> <p>Equipment:        M1114 Up-Armored                          HMMWV, S/N 999222</p> <p>Accident Date:    1 January 2015</p> <p>Location:         Yankee Training Area,                          AK</p> <p>Unit:                123<sup>rd</sup> Maint co, 49<sup>th</sup> FSB                          Ft Rucker, AL 36362</p> </div>	
<p><b>The left side of the report :</b></p> <ul style="list-style-type: none"> <li>➤ DA Form 285-A-R on top of the left-side lists all information appended to the left side of the technical report as substantiating data.</li> <li>➤ Include a number for all tabs and type the description of what the tab contains.</li> <li>➤ As a minimum, tabs 1 through 5 are required for all reports. Submit other items which explain or substantiate the report as appropriate. For example, if the material failure caused or contributed to the accident, ensure equipment maintenance records, historical records, deficiency reports (EIR/PQDR), modification work orders and special analyses are appended as appropriate.</li> </ul>	
<p><b>Tab 1- Serious Incident/Casualty Report</b></p>	
<p><b>Tab 2- Copy of orders appointing investigating board.</b></p>	
<p>✓ Are the orders signed by commander with general court-martial jurisdiction over the installation/unit responsible? (AR 385-40 para 1-9)</p>	
<p>✓ Are the appointed board members from other organizations other than the activity or unit incurring the accident. (AR 385-40, para 4-2a(1))</p>	
<p>✓ Does the board consist of a minimum three member board?</p>	
<p>✓ Is the president of the board a field grade officer, CW5, or a DA civilian (GS-12 or higher) familiar with the type of operation? AR 385-40 (para 4-2c(1))</p>	
<p>✓ When possible, is the recorder a safety trained individual? DA Pam 385-40, para 2-1c(2)?</p>	
<p>✓ Is the appointed recorder's rank commensurate with the recorder duties outlined in DA Pam 385-40, para 2-1c(2)?</p>	

✓	Do the selected board members have the technical expertise, experience, and authority required to carry out the duties outlined in DA Pam 385-40 para 2-1c?	
✓	Have all board members listed on the orders signed the DA Form 285-B-R for all copies of the report? <i>(If more than six members, sign continuation sheet)</i>	
<b>Tab 3- Map of the accident site.</b>		
✓	Include a map of the site which annotates where the accident occurred. Ensure the map includes sheet name, scale, and distance legend.	
<b>Tab 4- Diagrams and Photographs (DA PAM 385-40, para 2-5d and e, and paragraph 4-7d(4))</b>		
✓	Does the report include a diagram of the accident site/wreckage distribution?	
✓	Does the diagram assist in clarifying the accident sequence? Paragraph 2-5d.	
✓	Are all photos properly captioned and marked? Paragraph 2-5e.	
<b>Tab 5 – Certificates of Damage/ECODs/ACODs</b>		
✓	If there was damage to vehicle/system/equipment, submit ECOD/ACOD. ECOD/ACOD will include itemized list of damaged components, number and cost of manhours, and the total cost of repair.	
✓	If vehicle/system/equipment is classified as a total loss, a statement to that effect signed by the maintenance officer assigned to the accident board will suffice in lieu of ECOD. The statement will reflect the AMDF cost or applicable parts manual cost.	
<b>Tab 6 – Copy of Deficiency reports</b>		
✓	All failed or suspected failed parts/systems must be reported on a SF 368, Product Quality Deficiency Report (PQDR), and submitted to the appropriate agency. Copies of the SF 368 are to be included in the report.	
<b>Tab 7 – Directives, regulations, etc.</b>		
✓	Extracts of directives or manuals that establish the standards relative to and supporting the human and material issues will be included in the report.	
✓	Source document and date annotated on the Extract	
✓	Key words, phrases, and passages that substantiate or or referred to in other portions of the report, are highlighted.	
<b>Tab 8 - Special technical reports and laboratory analysis reports.</b>		
✓	Include a copy of the results of all fluid sample analyses conducted as part of the investigation (fuel, oil,hydraulic, etc)	
✓	Include a copy of the results of tear-down analyses, sample analyses or other material related analyses conducted as part of the investigation.	
<b>Tab 9 – Uncorrected Fault Record</b>		
✓	Include DA Form 2404 or Computer generated 5988E (PMCS) for vehicle/equipment/system involved if a material problem related to an uncorrected fault is involved/relevant.	
<b>Tab 10 – DA Form 2408-5.</b>		
✓	Append copies of DA Form 2408-5 if applicable to the vehicle/equipment/system when necessary to substantiate maintenance errors, and omissions that had a bearing on the accident.	
<b>Tab 11 – Weather Reports.</b>		
○	If weather had no bearing on the accident, a brief synopsis by the weather service activity of the weather that existed during the accident will suffice.	
○	If weather contributed to the accident, ensure the following is included:	
✓	A signed narrative of the weather conditions prior to and during the accident provided by a weather forecaster, briefer, or observer.	
✓	A copy of the weather forecast or observation from official files.	
<b>Tab 12 – Medical Data. Include the following as appropriate.</b>		
○	Copies of toxicology reports	
○	AFIP reports	
○	Autopsy reports	
○	Medical treatment reports	
<b>Tab 13 – Other</b>		
○	Include copies of other substantiating data deemed appropriate by the investigation board or information that is critical to the report and is not available from other sources.	

<b>US ARMY ACCIDENT REPORT</b> <b>INDEX A</b> <small>For use of this form, see AR 385-40 and DA PAM 385-40, the proponent agency is OCSA</small>		<i>Requirements Control Symbol CSOCS-308</i>		
<b>1. DATE OF ACCIDENT (YYMMDD)</b> <div style="text-align: right; margin-right: 100px;">020515</div>				
<b>2.</b>	<b>Information</b>	<b>Encl</b>	<b>N/A</b>	<b>See Remarks</b>
1	Serious Incident/Casualty Report	X		
2	Copy of Orders Appointing Investigating Board	X		
3	Map of Accident Site	X		
4	Daigrams and/or Photographs	X		
5	Certificate of Damage/ECOD	X		
6	Copy of Deficiency Reports		X	
7	Copy of Directives, Regulations, Etc.	X		
8	Special Technical Reports and Laboratory Analysis	X		
9	Copy of Uncorrected Fault Record	X		
10	Copy of Equipment Modification Record (DA Form 2408-5)		X	
11	Weather Data	X		
12	Medical Data (Autopsy, Toxicology, AFIP, etc.)	X		
13	Other (Specify) <i>Driver's Training and Qualification's Records</i>	X		
14	Other (Specify)			
15	Other (Specify)			
16	Other (Specify)			
17	Other (Specify)			
18	Other (Specify)			
<b>3. REMARKS</b>  <div style="margin-left: 20px;"> 7a. Corp Policy ltrs on Risk Management  7b. Extract of Unit Licensing SOP  7c. Extract of Unit Maintenance SOP   8a. AOAP results  8b. Vehicle service  8c. Brake Test </div>				

DA FORM 285-A-R, JUL 94

Example of a completed DA Form 285-A-R, Index A



<p><b>The Right – Side of the report:</b></p> <ul style="list-style-type: none"> <li>➤ Completed DA Form 285-B-R, on top of the right-side of the technical report lists all information appended to the right-side of the report.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ Place a letter tab separating documents as described on the DA Form 285-B-R (Tabs A through E are required).</li> </ul>	
<ul style="list-style-type: none"> <li>➤ Type signature block of all board members to include SSN, grade, branch, unit address, and telephone number. Ensure all board members sign all copies of the report unless a minority report is submitted IAW DA PAM 385-40, para 2-1h. Use continuation sheet if needed. * Include email address for the Board President when possible. (Official email... Army.mil)</li> </ul>	
<p><b>Tab A – Statement of Reviewing Officials (DA Form 285-O-R)</b></p>	
<ul style="list-style-type: none"> <li>○ States concurrence or nonconcurrence with the technical report. Nonconcurrence will be fully explained.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Reports actions taken as well as recommendations for additional action by higher headquarters or other Army commands. Attach as enclosures to this form copies of correspondence, forms, and other data requiring additional action.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Authenticate comments with signature and appropriate signature block (unit and title) at the close of reviewing official's remarks. * Please include a date.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Approval authority indicates Approval/disapproval of the report. Includes reasons for disapproval. (Title, Organization, date)</li> </ul>	
<p><b>Tab B- DA Form 285s</b></p>	
<ul style="list-style-type: none"> <li>○ Completed DA Form 285 filled out IAW the instructions in DA PAM 385-40.</li> </ul>	
<ul style="list-style-type: none"> <li>○ If more than one individual is involved (caused and/or contributed, or is injured) submit an additional DA Form 285, Section A &amp; B for each individual.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Ensure unit and SSN for each individual is correct and is consistent with other information in the report such as summary of witness statements, casualty reports, serious incident reports, training records, medical information, etc...</li> </ul>	
<p><b>Tab C- Findings and Recommendations</b></p>	
<p>➤ Findings:</p>	
<ul style="list-style-type: none"> <li>○ Is each finding supported and fully substantiated in the analysis portion of the Narrative?</li> </ul>	
<ul style="list-style-type: none"> <li>○ Are the findings formatted correctly, that is... (see Fig 4-1, DA PAM 385-40)</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Does the heading of the finding identify whether the finding is Present and Contributing or Present and Not Contributing?</li> </ul>	
<ul style="list-style-type: none"> <li>○ Does the heading of the finding identify whether it was caused by human error, material failure or environmental factors?</li> </ul>	
<ul style="list-style-type: none"> <li>✓ If human error is identified, does the heading also include the system inadequacy associated with the human error, e.g. individual, leader, training, standards, or support? (Fig 2-1 &amp; Fig 4-1, DA Pam 385-40)?</li> </ul>	
<ul style="list-style-type: none"> <li>○ Do the findings contain the required elements as described in DA PAM 385-40, para 4-4, that is...</li> </ul>	
<ul style="list-style-type: none"> <li>✓ An explanation of when and where the error, materiel failure, or environmental factor occurred in the context of the accident sequence of events; e.g., "walking," "lifting," "while driving," "while employing," "while planning," etc.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Identification of the individual involved by duty position; or the name and part number (PN) or national stock number (NSN) of the part, component, or system that failed; or a description of the environmental factor, as appropriate.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Identification of the activity/task or function the individual was performing and an explanation of how it was performed improperly. Refer to appendix B for mistake/error categories. The error could be one of commission or one of omission; e.g., and individual performed the wrong task, incorrectly performed the correct task, or failed to perform a required task or function. In the case of a materiel failure, identify the mode of failure (see appendix B for definitions and examples); e.g., corroded, burst, twisted, decayed, etc.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ Identification of the directive (i.e. SOP, FM, TM) or common practice governing the performance of the activity/task or function. In lieu of a written directive, the error may represent performance that is contrary to common practice.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ An explanation of the consequences of the mistake/error, materiel failure, or environmental conditions. An error may directly result in property damage or injury. A materiel failure may have an immediate effect on equipment or its performance, or it may create circumstances that results in error, injury or make further damage</li> </ul>	

inevitable.	
✓ Identification of the reasons (root cause(s)) the human, materiel, environmental conditions caused or contributed to the accident. Refer to the list and examples of root cause(s)/system inadequacy(ies) at appendix B.	
✓ A brief explanation of how each reason (root cause/system inadequacy) influenced the error, materiel failure, or environmental factor.	
o Factors that did not cause or contribute to the accident, but did contribute to the severity of injury or damage to equipment should be reported as findings. Personnel injuries attributable to defects in life support equipment, personnel protective clothing and equipment of crashworthiness design, should also be summarized as findings in this category. Injuries sustained from failure to use provided equipment, i.e., seat belts, must also be addressed. In addition to the previously listed requirements, these findings should be presented as follows:	
✓ The findings and recommendations fitting this category will be separated from those that caused the accident.	
✓ These findings will be preceded by the following statement: "The finding(s) listed below did not directly contribute to the causal factors involved in the accident; however, it (they) did contribute to the (severity of injuries) or (accident damages)."	
✓ Each finding in this category will contain the required elements of a finding.	
o The board should report errors, material failures, or hazards not associated with the accident that have a high potential for causing an accident or that could adversely affect the safety of training/combat operations if left uncorrected. These deficiencies should be reported in the same manner as a finding with the following stipulations:	
✓ They are separated from findings that caused the accident and/or did not cause the accident but contributed to the severity of the accident.	
✓ They will be preceded by the following statement: "The finding(s) listed below did not contribute to this accident. However, if left uncorrected, it (they) could adversely affect the safety of training/combat operations."	
o Is a DA Form 285 section A and B filled out for all individuals cited in the findings as committing human error?	
➤ <b>Recommendations.</b>	
o Each finding will be followed by recommendations having the best potential for correcting or eliminating the reasons (root cause(s)/readiness shortcoming(s)/system inadequacy(ies) the error, materiel failure, or environmental factor that caused or contributed to the cause of the accident.	
o Recommendations should not focus on punitive steps addressing an individual's failure in a particular case.	
o Each recommendation will be directed at the unit, command, or activity having proponenty for, and which is best capable of, implementing the actions contained in the recommendation.	
o The actions required at unit level, higher level, and Department of the Army levels of command will be addressed by each recommendation. If one or more of these three command levels had no action requirement, a negative report is required; e.g., "Department of the Army level actions: None."	
o "Unit level" "Higher level," and "Department of the Army" levels of action, as used in this context, respectively refer to the unit deemed most responsible for the accident: the unit's chain of command, up to and including MACOM, and DA-level activities. In cases where a MACOM is the highest level proponent for a recommended action having Army-wide application, the MACOM will be listed in the "Department of the Army level" category.	
<b>Tab D – Narrative of the Accident.</b>	
➤ A narrative of the investigation will be completed for all on duty Class A and B accident reports required by AR 385–40.	
➤ The narrative of the investigation will be prepared on letter size paper.	



<p>➤ The investigation board will report, in narrative form, the facts, conditions, and circumstances as established during the investigation and present this information in four sections (history of events, human factors, materiel factors, and analysis). The first three sections will contain only factual data. The analysis section is reserved for the board's documentation of its conclusions/opinions concerning the accident cause relationships.</p>	
<p><b>1. History of Events.</b> (DA PAM 385-40, paragraph 4-4a)</p>	
<p>o Does the Pre-Accident phase:</p>	
<p>✓ Report the type of mission, purpose, how the unit was tasked with the mission?</p>	
<p>✓ Who and what authority approved it?</p>	
<p>✓ Identify the individuals involved in the accident/injury, to include duty, unit assigned, and how they were selected for and informed of the mission?</p>	
<p>✓ Describe the actions of the personnel involved in preparing for the mission to include planning, orders, to include type serial lot/numbers, inspections conducted and the dispatching process, etc</p>	
<p>✓ Describe facts which may indicate whether or not a sense of urgency was associated with the mission and if there were any delays prior to the onset of the mission/activity/departure.</p>	
<p>o Does the Accident Phase:</p>	
<p>✓ Indicate when the vehicle/personnel departed on the mission and continue until the accident occurred?</p>	
<p>✓ If the mission involved more than one routine segment, requiring multiple activities, functions? or stops before the accident occurred, concisely summarize these events until addressing the segment involving the accident?</p>	
<p>✓ If the segment involving the accident contained an emergency, give a detailed description of the onset of the emergency to include where and when it occurred, symptoms, warnings, indications, instrument readings, etc?</p>	
<p>✓ Describe actions/reactions of the personnel between the time of the emergency and the conclusions of the accident?</p>	
<p>o Does Post Accident Phase:</p>	
<p>✓ Briefly describe the conditions of the equipment/vehicle/structure/vessel, to include whether or not the engine(s) was still operating, and the condition of the occupants immediately after the accident? <i>Reserve details of damage to various equipment/vehicle/structure components for the materiel factors portion of the narrative.</i></p>	
<p>✓ If a post-accident fire occurred, so indicate and explain how and when it was extinguished, if applicable?</p>	
<p>✓ Describe how the accident site was located?</p>	
<p>✓ Summarize rescue and first aid efforts, to include who notified rescue/medical/police of accident, response time, type of vehicle used in the evacuation, who administered first aid/CPR and their medical qualifications?</p>	
<p>✓ Briefly summarize egress of occupants from vehicle/equipment, time of arrival at the medical facility, medical facility providing treatment and time of death if applicable? <i>Reserve detail of the egress, rescue and evacuation for the rescue operations portion of the narrative.</i></p>	
<p><b>2. Human Factors.</b> For accidents resulting from causes other than human factors, the human factors portion of the narrative may be sharply reduced to a negative response for the subheadings except for subheadings addressing personnel background information and personnel management.</p>	
<p>o <b>Personal background information.</b> This part of the narrative is extremely important in terms of providing a complete and informative profile of the principal persons involved. The sources of information will include, but are not limited to, personnel, training records, friends, peers, subordinates, superiors, and the persons themselves.</p>	

✓	Background information primarily addresses the training, experience, qualifications, and reputation of the individual upon arrival at the unit to which assigned at the time of the accident.	
✓	Briefly summarizes service background to include service entry, training, type of assignments, and qualifications acquired prior to joining current unit.	
✓	Reports on the primary personnel involved to include evidence of traffic violations and prior accident experience. If the latter applies, explain role in prior accident.	
✓	Describes experience in mission/duty relative to the accident mission/duty, also describe if the individual received his/her qualifications by on-the-job training (OJT) or attending a school.	
✓	Discusses only those pre-service activities/experiences which are accident related.	
* The same scope of information is usually not necessary for personnel not directly involved, but if it is suspected or known that other personnel played a role in the accident, summarize their background, experience and qualifications. This part of the narrative can involve commanders, operations personnel, supply and weather personnel, maintenance personnel, and others, if applicable.		
○	<b>Personnel management.</b>	
✓	Personnel management should primarily address how the individual was managed by the unit to which assigned at the time of the accident.	
✓	Review how the unit has managed each individual involved. Begin with date of assignment to current unit. Review experience, training and qualifications upon assignment and report how individual was tasked, trained, and otherwise managed up to the date of the accident.	
✓	Describe how the unit prepared the individual with qualifications and readiness to perform the mission.	
✓	Indicate whether or not the individual was qualified to perform the mission involved in the accident.	
✓	Explain irregularities in the individual's training folder.	
✓	Also discuss whether the individual was medically qualified to perform the mission involved in the accident.	
✓	Discuss additional duties and the percentage of time given them versus their primary duty.	
✓	Report qualifications acquired since assignment to unit such as OJT, schooling, etc.	
✓	Review the procedures involved in selecting the personnel involved for the mission.	
✓	Describe timeliness of notification, compatibility of personnel for the mission, and their relative experience for the mission.	
✓	Describe involved personnel in terms of their professional reputations in unit, opinions of peers, subordinates, and others who have worked with/for them, etc. Describe the individuals' sleep, work and dietary habits and use of alcohol and nicotine.	
✓	Review unit sleep/rest policy. Report whether or not a sleep/rest policy was in effect, being monitored and complied with.	
✓	If postaccident evaluations were administered, summarize results. Highlight weaknesses in proficiency if appropriate, especially the performance of tasks duplicating those involved in the accident.	
✓	Discuss if the individual was receiving medication before the accident. Report type, source, dosage, side effects, and possible effect on performance. Summarize the findings of the postaccident medical examination.	
✓	If the individual sustained injuries, give a brief description of the injuries and how they occurred.	
✓	If the individual sustained fatal injuries, briefly summarize autopsy report (if available), to include cause of death.	
○	<b>Vehicle/equipment suitability.</b>	
✓	Describe the suitability of the vehicle/equipment/structure /vessel to perform the mission.	



✓	Consider primary purpose versus use at the time of the accident, equipment design limitation as found in applicable operators manual, configurations, etc.	
o	<b>Communications.</b>	
✓	Describe evidence relating to communications equipment (adequacy of visual and electronic signals, etc.) and the communication that occurred or failed to occur among the crew, between crew and passengers, and between crew and outside services; e.g., base station, operations, command and control, agency to agency, service to service, etc.	
✓	Consider language difficulties, clarity of spoken words, static, interference, adequacy and precision of instruction, etc.	
✓	Summarize tape recordings of communications between crew and other stations, if applicable.	
o	<b>Meteorological information.</b>	
✓	Describe weather conditions that prevailed throughout the mission and conditions that existed at the accident site at the time of the accident. Include sky condition, visibility, winds, icing, turbulence, and any significant weather conditions.	
✓	Consider weather observations made by trained weather observers and/or witnesses in the area.	
✓	If weather was considered a contributory factor to the accident, describe the accuracy of the weather forecast. If the actual weather differed significantly from the forecast, include a discussion of the information that was available to the forecaster.	
✓	For parachute accidents evaluate the winds aloft (at drop altitude) and surface winds. If the accident occurred at night, include details of moon illumination if it applied to the accident.	
o	<b>Support services.</b>	
✓	Describe evidence that relates to the role of support services in the accident.	
✓	Consider ground guides, road guards, traffic signs, fire stations, POL and dispatch procedures, etc.,	
o	<b>Accident survivability.</b>	
✓	Discuss crashworthiness/construction of the Vehicle/equipment /structure in terms of crash/collapse sequence, impact conditions, kinematics, and crash impact forces. Include the performance of the restraint systems and the adequacy of the vehicle/equipment structure to maintain occupiable space and attenuate crash forces.	
✓	Explain occupant injury relationship to crashworthiness.	
✓	Explain if injuries occurred during or after the crash/accident sequence.	
✓	Also include the performance of personal protective/restraint and equipment; e.g., seat belt, visor, helmet, roll bar, clothing, etc. Discuss in terms of use and nonuse.	
o	<b>Rescue operations. Discuss details of egress, survival and rescue investigations.</b>	
✓	Describe where individuals were located in vehicle/structure/equipment, how and where they exited. Difficulties encountered, and position of vehicle/equipment at time of egress.	
✓	Describe factors that may have enhanced or inhibited the success of the survival/rescue situation.	
✓	Report when and how rescue personnel were notified and how long it took rescue personnel to respond to the initial notification, arrive at accident site, and evacuate the survivors.	
✓	Explain problems associated with delays in rescue.	
o	<b>Special Investigation.</b> Report results of any special investigations that were conducted because of the accident. If, for example, during the investigation, it is found that night vision devices played a role in the accident, the applicable program manager should be notified and make a determination made as to their involvement.	
o	<b>Witness interview.</b>	
✓	Briefly indicate number of witnesses interviewed and identify duty position and experience.	

✓ Summarize pertinent witness observations and indicate whether or not witnesses generally agreed concerning accident events.	
✓ Describe major conflicts in the provided information. Resolution of inconsistencies in the information should be discussed in the analysis portion of the report. Opinions regarding witness credibility should also be reserved for the analysis section.	
<b>2. Materiel factors.</b> Report results of materiel factors investigation in the appropriate subparagraphs. Those accidents that do not involve materiel failure/malfunctions may be abbreviated to include negative reports. Identify and discuss damage resulting from pre-accident materiel failure/malfunctions and omit damage that resulted from crash/impact forces exceeding design limits. References can be made to the wreckage distribution diagram, photographs, reports, records, etc. Include the following:	
○ <b>Vehicle/Equipment/Structure/Vessel worthiness.</b>	
✓ Describe the worthiness of the vehicle/equipment/structure. Investigation should include, but not be limited to, maintenance records, historical records, interviews with maintenance personnel, operator preventive maintenance records, dispatch records, etc.	
✓ Identify all deficiencies, or discrepancies found during the investigation that had a role in the accident, or may not have had a role but, if not corrected could impair safe operations. However, reserve discussion of the results of discrepancies/deficiencies for the analysis portion of the narrative.	
✓ Discuss those technical publications which were not complied with, or were inadequate in any manner.	
○ <b>Systems.</b> Use subparagraphs to report evidence obtained in the examination of fuel, steering/control, hydraulic, electrical, frame, tire, weapon, suspension, and brake systems. Note all discrepancies and their effects on the operation of the vehicle and equipment.	
○ <b>Engine.</b> Report the evidence obtained during examination of the engine(s). Include indications of power at impact, if available.	
○ <b>Transmission.</b> Report condition and describe any faults noted.	
○ <b>Laboratory analysis.</b> Report the results of laboratory tests and analyses of components, parts submitted for teardown/special testing, and vehicle fluids.	
○ <b>Accident site information.</b> Describe the accident site, to include dimensions, lighting and marking, obstructions, type and condition of surface, or any other peculiarities found.	
○ <b>Fire.</b> Discuss the role of fire to include when it occurred, manner in which the fire was detected, ignition source, combustible material, location, propagation, and degree of success in extinguishing.	
<b>3. Analysis.</b>	
➤ The analysis paragraph summarizes the narrative and discusses the opinions and conclusions of the board and must conclusively show the cause and effect relationship of the evidence gathered during the accident investigation.	
➤ The analysis will discuss the influence of command activity, or lack thereof, in the context of its role in the accident or the prevention of accidents.	
➤ Subparagraph headings in the analysis may coincide with pertinent subparagraphs in the first three sections of the narrative, with the exception of command influence, which is reserved for the analysis paragraph only.	
➤ As a minimum, the analysis part of the narrative will provide the following information:	
○ Identify the errors, materiel failures, or environmental factors involved in the accident in the context of the accident sequence of events. To accomplish this task, the board will find it useful to review the listings of mistake/errors, materiel failures/malfunctions, and environmental factors and the explanations, examples, and key words contained in appendix B.	
○ Discuss the results/effects of the errors/materiel failures/environmental factors.	



<ul style="list-style-type: none"> <li>○ Identify the root cause(s)/readiness shortcoming(s) that caused or permitted the errors/materiel failures/environmental factors to occur. To fulfill this task, the board will find it useful to refer to the explanations, examples, and key words contained in appendix B DA PAM 385-40.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Report preventable injuries in the context of the accident sequence of events and explain how they occurred.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Identify the root cause(s)/readiness shortcoming(s) that caused or permitted injuries to occur.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Discuss the command influence relative to cause factors and accident prevention.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ To fulfill these information requirements, the board should review all the evidence relating to the accident disclosed during the human, environment and materiel factors investigations. This may require readdressing specific paragraphs contained in the narrative and indicating the relationships between the facts disclosed and the errors/failures/environmental factors that occurred. From this review, the board should consider a logical development of the various circumstances and events that may have existed. This process of deductive reasoning should lead to the formulation of an explanation (or explanations) concerning the accident cause and preventable injuries (if and why they occurred). The explanation(s) should be discussed and tested against the evidence gathered during the investigation. If it is necessary to develop hypotheses, it is important for the board to state why a particular hypothesis was or was not supported by the evidence.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ The investigation board should initially outline and structure the correlation of cause-related errors/materiel failures/environmental factors and associated root cause(s)/readiness shortcoming(s). When the outline has been completed, the narrative rationale and conclusions should be composed using the following examples as a guide:</li> </ul>	
<ul style="list-style-type: none"> <li>○ Begin the paragraph by specifying the scope and conclusions of the investigation. In all cases, begin the paragraph with these words: "After analyzing the human, materiel, and environmental data collected during the investigation, the board concluded the accident was caused by" ... Complete the sentence by specifying the factor(s) (human, materiel, or environment) which caused the accident, e.g., "... human error-leader failure."</li> </ul>	
<ul style="list-style-type: none"> <li>○ Describe when or where the error/failure/injury/ environmental factor occurred in the context of the accident chronology of events; e.g., "before the mission," "while installing a hydraulic line," "during steering," "during the crash sequence," etc.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Identify the duty position of the person who erred, became injured, or the name and part number or the NSN of the part, component or system that failed; e.g., "the mechanic"; "the brake line, part number 1-234-5678-9"; "the driver" ; etc.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Identify the error in the context of a listed mistake/error category; e.g., "incorrectly diagnosed the emergency at hand," "failed to assign responsibilities," "failed to detect," etc. If a materiel failure is being reported, explain the type of failure; e.g., "overheated," "vibrated," "frayed," "decayed," etc. If an injury is being reported, explain if the individual "struck" or "was struck by" the injury-causing agent.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Cite the directive or standard the mistake/error category failed to comply with; e.g., "contrary to standard and description for task 5007, Tc 1-135"; etc. In the absence of written guidance/standards for a mistake/error, evaluate the task in terms of how other equally qualified and prudent personnel would perform the same task under similar circumstances. If the error represents performance that is unacceptable, it is contrary to common practice.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Describe the specifics of the error; e.g., "he excessively torqued the nut, PN 12345" ; etc.</li> </ul>	
<ul style="list-style-type: none"> <li>○ Describe the consequences of the error, materiel failure, environmental factor, or the resulting injury.</li> </ul>	

<ul style="list-style-type: none"> <li>○ A complete failure statement could read as follows: "While driving an M109 (CUCV), a section of the right front brake line, PN 1-234-5678-9, eroded through. As a result, all brake fluid was lost and subsequent loss of effective breaking."</li> </ul>	
<ul style="list-style-type: none"> <li>➤ Each statement of error, materiel failure, environmental factor or injury will be followed by statements identifying the root cause(s)/readiness shortcoming(s) that caused or permitted the error/failure/injury to occur or an environmental factor to become a cause. The root cause(s)/readiness shortcoming(s) statements are the most important part of the analysis. This is because the root cause(s)/readiness shortcoming(s) causing or permitting an error, failure, or injury to occur or an environmental factor to become a cause are more important from a remedial standpoint than the error, failure, injury, or environmental factor itself. Each root cause(s)/readiness shortcoming(s) statement will contain the following information:</li> </ul>	
<ul style="list-style-type: none"> <li>○ A transition phrase to tie the root cause(s)/readiness shortcoming(s) to the error/failure/injury; i.e., "the driver improperly responded to the emergency at hand because...", "the brakeline eroded to a point of failure because...", "the driver sustained back injury because...", etc.,</li> </ul>	
<ul style="list-style-type: none"> <li>○ Identification of the root cause(s)/readiness shortcoming(s) category(ies); e.g., "because of inadequate motivation/mood (attitude)," "inadequate supervision by the unit operations officer," "because of inadequate quality control by the manufacturer," "because of inadequate seat design," etc.,</li> </ul>	
<ul style="list-style-type: none"> <li>○ An explanation of how or why each root cause(s)/readiness shortcoming(s) caused or permitted the error/failure/injury/environmental factor.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ Once the preceding elements of information are reported for each error, failure, injury, or environmental factor in the manner stated, the resulting conclusions (findings) can stand on their own. The example of human error used in these instructions ties three root cause(s)/readiness shortcoming(s) to the error. There could be more or less root cause(s)/readiness shortcoming(s), depending upon the circumstances. The point to be made is that root cause(s)/readiness shortcoming(s) causing or permitting an error, failure, or environmental cause must be made visible before effective corrective actions can be recommended.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ The analysis part of the narrative does not have to be limited to explaining and concluding what caused or contributed to the accident or injuries. The analysis may also address present but noncontributing hazards if they could adversely affect the safety of operations. There are provisions for reporting non-cause-related hazards. They are contained in the instructions for completing the findings and recommendations.</li> </ul>	
<b>Tab E – Summary of Witness Interviews.</b> Ref: AR 385-40, para 1-7; DA Pam 385-40, Para 2-3 & 4-5 and Corrections and Interpretations Message dtd Feb '95	
<ul style="list-style-type: none"> <li>➤ <b>DA Form 285-W</b>, Summary of Witness Interview, will be completed for all on duty Class A and B accidents.</li> </ul>	
<ul style="list-style-type: none"> <li>○ As a minimum, summaries of the interviews with the primary personnel involved/injured will be included.</li> </ul>	
<ul style="list-style-type: none"> <li>○ The form will also be used to summarize interviews and statements of commanders, supervisors, maintenance personnel, and others who are able to contribute pertinent information concerning the accident.</li> </ul>	
<ul style="list-style-type: none"> <li>➤ <b>Interview summary:</b></li> </ul>	
<ul style="list-style-type: none"> <li>○ A witness statement should not be a verbatim or an edited transcript of all that was stated. Summarization's of the witness's testimony is required, but should not exclude any information that assists in explaining why the accident occurred. The summarization should be entered in block 13 of the DA Form 285-W-R. Use letter size paper for continuation sheets, if required. (Note: Please, do not submit testimony or statements in a question and answer type format. Summarize them.)</li> </ul>	
<ul style="list-style-type: none"> <li>○ Summarization's should be written in the third person ("the witness said," "they saw," and so forth), and not in the first person ("I saw," "I observed," and so forth.).</li> </ul>	



○ The testimony of a witness will not be made under oath. There is no requirement to have an interview signed by the witness, and such <b>will not</b> be done.	
➤ <b>Promise of Confidentiality <i>will not be offered</i></b> in ground accident investigations without the consent of the the Commander, USASC. AR 385-40 para 1-7(3).	
○ If "Promise of Confidentiality" has been authorized by the Commander of USASC:	
✓ The report will be deemed a "Limited Use Safety Accident Investigation Report" and will be marked, handled, and briefed IAW AR 385-40, paragraph 1-7a(4) and DA Pam 385-40, paragraphs 2-3 & 4-5.	
✓ The witnesses' offered the promise of confidentiality will initial the appropriate statement (request/decline) in block 16 of the DA Form 285-W-R.	
✓ If promise of confidentiality is offered and requested, the interviewer sign and date and check Promise of Confidentiality in block 12.	
➤ <b>All witnesses will be interviewed according to chapter 2, DA PAM 385-40.</b> The investigator will emphasize to the witness that the sole purpose of the accident investigation is accident prevention. The witness should be further informed that the Army seeks to isolate the causes of the accident so it may take appropriate action to avoid similar accidents. If the witness is a civilian, the investigator will avoid using Army terms and acronyms.	